

REMARKS

Election/Restriction

The Examiner requested affirmation of election of Group I, claims 1-17. Applicants acknowledge the election without traverse.

Rejections under 35 USC §102(b)

Claims 1, 3 and 4 are rejected under 35 USC §102(b) as being anticipated by Hosonuma (U.S. Patent No. 4,396,642).

U.S. Patent No. 4,396,642 is a patent entitled “Hydrolytically Stabilized Polarizer” issued to Bolt et al but not Hosonuma. Through a telephone interview, the Examiner acknowledged that the cited reference is Hosonuma (U.S. Patent No. 4,643, 529).

Claim 1 has been amended to clarify that a long polymer film has “an MD direction and a TD direction” and also to recite “wherein the length in the MD direction of the polarizing film is not smaller than five times as long as the length in the TD direction of the polarizing film,” incorporating original claim 2.

Hosonuma does not disclose a length of the polarizing film. Hosonuma describes as follows:

An unoriented film (100 μm thick) formed in Example 1 was imprinted with a longitudinal ink mark 100 mm long so as to be equidistant from both lateral ends. A tentering machine was constructed by modifying a simultaneous biaxial stretching machine having clips of the pantograph type so that, in the stretching section, the film speed was gradually reduced at a constant rate as the film traveled in the machine direction. **The above unoriented film was fed to this tentering machine, stretched transversely in such a way that the**

spacing between clips increased from 200 mm at the entrance to 900 mm at the exit (i.e., by a stretch ratio of 4.5), and then thermally fixed to obtain a polyester polarizing film (about 40 μm thick). The temperatures of the preheating section, stretching section and heat-treating section of the tentering machine were 90°C., 80°C. and 180°C., respectively, and the film speed at the exit was 5 m/min.

(Hosonuma, column 6, lines19-29). Thus, in Hosonuma, the film was stretched transversely in such a way that the spacing between clips increased from 200 mm at the entrance to 900 mm at the exit. According to the description, the client considers that the width in the TD direction of the stretched film is at least 900 mm. On the other hand, the width of the MD direction is as small as 55 mm. These descriptions are incompatible with the feature of “the length in the MD direction of the polarizing film is not smaller than five times as long as the length in the TD direction of the polarizing film.”

Thus, Hosonuma does not teach or suggest “wherein the length in the MD direction of the polarizing film is not smaller than five times as long as the length in the TD direction of the polarizing film.”

For at least these reasons, claim 1 patentably distinguishes over Hosonuma. Claims 3 and 4, depending from claim 1, patentably distinguish over Hosonuma for at least the same reasons.

Also, claim 4 has been further amended to include the feature of “the polarizing film is produced by stretching the long polymer film in the TD direction with the stretching ratio of 1.1 to 20 times as long as the initial width” and “the polarizing film is produced by shrinking the long polymer film in the MD direction with the stretching ratio of 70 to 99% as long as the initial length.” The amended features are supported in the specification at paragraph [0040].

Rejections under 35 USC §103(a)

Claims 2 and 5-7 were rejected under 35 USC §103(a) as being obvious over Hosonuma (U.S. Patent No. 4,396,642) as applied to claims 1, 3 and 4 above.

Claims 8-10, 12, 16 and 17 are rejected under 35 USC §103(a) as being obvious over Hosonuma (U.S. Patent No. 4,396,642) as applied to claims 1, 3 and 4 above, and further in view of Yoshida (U.S. Patent Application Publication No. 2001/0030726).

Claims 8, 11 and 13-17 are rejected under 35 USC §103(a) as being obvious over Hosonuma (U.S. Patent No. 4,396,642) as applied to claims 1, 3 and 4 above, and further in view of Abileah (U.S. Patent No. 5,907,378).

Claims 5-17, directly or indirectly depending from claim 1, also patentably distinguish over Hosonuma for at least the same reasons discussed regarding claim 1. Alleged disclosures of Yoshida and Abileah do not remedy the deficiencies of Hosonuma.

For at least these reasons, claims 5-17, directly or indirectly depending from claim 1, also patentably distinguish over Hosonuma, Yoshida and Abileah.

Moreover, regarding claim 8, the Examiner alleges as follows:

Abileah teaches that the retardation film has a slow axis, or axis of retardation that is parallel to the transmission axis of the polarizing film (optical axis of each retardation film is oriented substantially parallel to the adjacent polarizer transmission axis, column 32, lines 39-42), which means that the slow axis of the retardation film is perpendicular to the absorption axis of the polarizing film.

(Office Action page 10, lines 5-9). Abileah describes as follows:

FIG. 44 is a computer simulation contrast ratio graph of another NW embodiment of this invention which utilizes biaxial front and rear

retardation films each having retardation values $d\cdot\Delta_{ZX} = -160$ nm and $d\cdot\Delta_{ZY} = -60$ nm. Because the retardation values are negative, the films have negative birefringence. $d\cdot\Delta_{ZX}$ is defined as $d\cdot(n_z - n_x)$ wherein n_x is the largest index of refraction in the film and n_z is the smallest. Therefore, $d\cdot\Delta_{ZX}$ is always the largest retardation value herein. The graph of FIG. 44 was plotted using the parameters of $V_{ON} = 6.0$ volts, a LC birefringence of 0.084, a V_{OFF} of 0.9 V, a cell gap of 5.70 μm , a temperature of about 30°C., an "X-buffed" configuration, and a wavelength of 550 nm. **The local X' is the axis with the largest index of refraction, or n_x . The local X' optical axis of each retardation film is oriented substantially parallel to the adjacent polarizer transmission axis.** In other words, the local X' axis of the rear retardation film is substantially parallel to the transmission axis of the rear polarizer, and the local X' optical axis of the front biaxial retardation film is substantially parallel to the front polarizer transmission axis. The local X' optical axis in this embodiment has the aforesaid retardation value of $d\cdot\Delta_{ZX} = -160$ nm, because n_x was the largest index of refraction. The rear and front polarizer axes define an angle of about 90° therebetween. The axis with the smallest index of refraction, or n_z , is oriented about perpendicular to the planes defined by the retardation films.

(Abileahm, column 32, lines 27-52). Here, Abileah says that the local X' (the axis with the largest index of refraction, or n_x) of each retardation film is oriented substantially parallel to the adjacent polarizer transmission axis.

On the other hand, claim 8 recites "a retardation film having a slow axis in the MD direction, which comprises a long polymer film." Thus, the slow axis of a retardation film is in the MD direction. Claim 1 recites "wherein the polarizing film has an absorption axis in the TD direction of the polarizing film."

The Examiner's allegation does not appear to be correct because Abileah discusses the "axis with the largest index of refraction" while claim 8 recites regarding a "slow axis." Please confirm.

Application No.: 10/566,714
Art Unit: 2871

Amendment under 37 C.F.R. §1.111
Attorney Docket No.: 053565

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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